

ONLINE SEARCH REQUEST FORM

USER Sue Perkins SERIAL NUMBER 07/715,3ART UNIT 189-B PHONE 308-1030 DATE 9-26/91

Please give a detailed statement of requirements. Describe as specifically as possible the matter to be searched. Define any terms that may have special meaning. Give examples, citations, authors, or keywords, if known.

You may include a copy of the broadest and or relevant claim(s).

Please search in CAS only; The following peptide:

K L L L L K L L L L K L L L L K L L L L

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Sue

STAFF USE ONLY

COMPLETED 9-26-91
SEARCHER Alex
TIME 60 TOTAL TIME 60

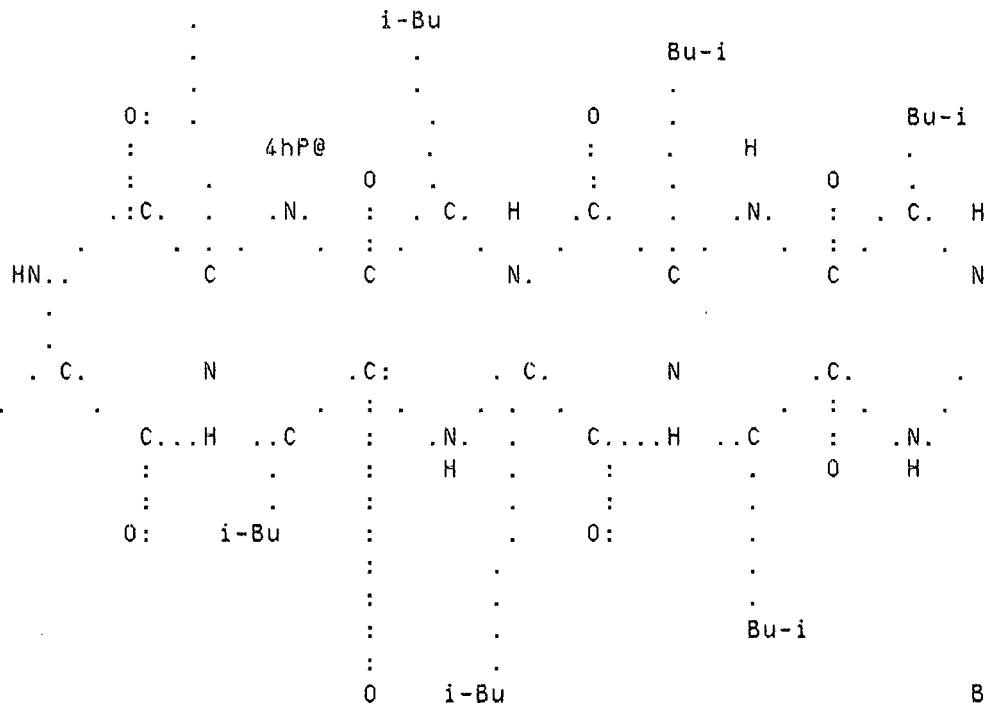
SYSTEMS
☒ CAS
☐ D/
☐ D

AN CA107(21):194788J
TI Environment-dependent conformation and antimicrobial activity of a
gramicidin S analog containing leucine and lysine residues
AU Ono, Shin; Lee, Sannamu; Kadera, Yasushi; Aoyagi, Haruhiko; Waki,
Michinori; Kato, Yetsuo; Izumiya, Nobuo
CS Fac. Sci., Kyushu Univ.
LO Fukuoka 812, Japan
SO FEBS Lett., 220(2), 332-6
SC 10-5 (Microbial Biochemistry)
SX 6
DT J
CO FEBLAL
IS 0014-5793
PY 1987
LA Eng
YY 113-73-5D, Gramicidin S, analogs ***110954-14-8***
(environment-dependent conformation and antimicrobial activity
of)

AP501. #4
d
microfilm.

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:(Leu-Hyp-Leu-Leu-Leu)(Leu-Hyp-Leu-Leu-Leu)



Page 1-A

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: (CH2)4NH2

.C.

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C. NH

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Page 1-B

1 REFERENCES IN FILE CA (1967 TO DATE)

=> fil ca

FILE 'CA' ENTERED AT 09:56:43 ON 26 SEP 91

USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT

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FILE COVERS 1967 - 23 Sept 91 (910923/ED) VOL 115 ISS 12.

For OFFLINE Prints or Displays, use the ABS or ALL formats to obtain abstract graphic structures. The AB format DOES NOT display structure diagrams.

=> s 12

L3 1 L2

=> d bib hit

Perkins
715 397

File Registry.

96 KLLLL/SQS
67 LLLKL/SQS
66 LKLLL/SQS
100 LLLLK/SQS
112 LLKLL/SQS
96 KLLLL/SQS
67 LLLKL/SQS
66 LKLLL/SQS
100 LLLLK/SQS
707 LLLK/SQS
33045 LK/SQS
L1 0 KLLLLKLLLLKLLLLKLLLLK/SQS

=> d his 12

(FILE 'REGISTRY' ENTERED AT 09:53:58 ON 26 SEP 91)

L2 1 S KLLLLKLLLLK/SQS

=> d sqid@c

L2 ANSWER 1 OF 1

COPYRIGHT (C) 1991 AMERICAN CHEMICAL SOCIETY

RN 110954-14-8
CN Cyclo(L-leucyl-D-leucyl-L-leucyl-L-leucyl-L-lysyl-L-leucyl-D-leucyl-L-leucyl-L-leucyl-L-lysyl) (9CI) (CA INDEX NAME)
CN 1,4,7,10,13,16,19,22,25,28-Decaazacyclotriacontane, cyclic peptide deriv. (9CI)
FS PROTEIN SEQUENCE
SSI Cyclo(L-leucyl-D-leucyl-L-leucyl-L-leucyl-L-lysyl-L-leucyl-D-leucyl-L-leucyl-L-leucyl-L-lysyl)
SQL 10
NTE cyclic

SEQ 1 LLLIKLLLLK

=====

HITS AT: 1-10

MF C60 H112 N12 O10

SR CA

LC CA

STE *

CAS
8/92
UMP

~~Q~~ ANSWER 1 OF 6 COPYRIGHT 1992 ACS

AN CA116(7):53907w

TI Pulmonary surfactant protein B (SP-B): structure-function relationships

AU Cochrane, C.G.; Revak, S.D.

CS Dep. Immunol., Scripps Res. Inst.

LD La Jolla, CA 92037, USA

SD Science (Washington, D.C., 1983-), 254(5031), 566-8 OCTOBER 1991

SC 6-3 (General Biochemistry)

SX 1, 13

DT J

CO SCIEAS

IS 0036-8075

PY 1991

LA Eng

AN CA116(7):53907w

AB SP-B is a protein in pulmonary surfactant i.e., in greatest part, responsible for resistance to surface tension and prevention of collapse of pulmonary alveoli. Peptides of 21 residues, synthesized following the sequence of SP-B or resembling the hydrophobic and hydrophilic domains of SP-B (such as RLLLLRLLLLRLLLLRLLLLR: R = Arginine; and L = Leucine, enhanced the abilities of phospholipids to reduce surface tension both in vitro and in vivo. Intermittent pos. charged residues were essential for this activity. The SP-B-like peptides were found by tryptophan fluorescence to partition within the phospholipid layer in contact with both polar head groups and acyl side chains. These data, together with findings that the SP-B-related peptides increase inter- and intramol. order of the phospholipid layer, suggest that SP-B resists surface tension by increasing lateral stability of the phospholipid layer. These peptides could serve as a material for replacement therapy in respiratory distress syndrome.

~~Q~~ ANSWER 2 OF 6 COPYRIGHT 1992 ACS

AN CA115(11):108814a

TI Raman spectroscopic studies of model human pulmonary surfactant systems: phospholipid interactions with peptide paradigms for the

surfactant protein SP-B

AU Vincent, James S.;Revak, Susan D.;Cochrane, Charles G.;Levin, Ira W.

CS Chem. Dep., Univ. Maryland

LD Cantonsville, MD 21228, USA

SD Biochemistry, 30(34), 8395-401 *Aug. 1991*

SC 6-3 (General Biochemistry)

DT J

CO BICHAU

IS 0006-2960

PY 1991

LA Eng

OS CJACS

AN CA115(11):108814a

AB The temp. dependence of dipalmitoylphosphatidylcholine (DPPC)/phosphatidylglycerol (PG) multilayers, reconstituted with various synthetic peptides for modeling human lung surfactant, was monitored by vibrational Raman spectroscopy. The synthetic peptides consisted, resp., of residues 59-81 of the human surfactant protein SP-B and 21 amino acid residue peptides contg. repeating units of arginine sepd. by either 4 or 8 leucines (RL4 or RL8). Each peptide demonstrated the ability to reduce significantly the surface tension of analogs of the phospholipid mixt. used in the Raman studies. Raman spectroscopic integrated band intensities and relative peak height intensity ratios, two spectral parameters used to det. bilayer disorder, provided sensitive probes for characterizing multilayer perturbations in the reconstituted liposomes. Temp. profiles derived from the various Raman intensity parameters for the 3100-2800-cm⁻¹ C-H stretching mode region, a spectral interval representative of acyl chain vibrations, reflected lipid reorganizations due to the bilayer interactions of these peptides. For the three reconstituted multilamellar surfactant systems, the gel-to-liq.-cryst. phase-transition temps. T_m, defined by acyl chain C-H stretching mode order/disorder parameters, increased from 35.degree. in the peptide-free system to 37-38.degree., indicating increased lipid headgroup constraints for the model liposomes. Although the values of T_m were similar for the three recombinant lipid/peptide assemblies, individual phase-transition cooperativities varied significantly between systems and between

spectroscopically derived order/disorder parameters.

L3 ANSWER 3 OF 6 COPYRIGHT 1992 ACS

AN CA115(11):105792f

TI The use of synthetic peptides in the formation of biophysically and biologically active pulmonary surfactants

AU Revak, Susan D.; Merritt, T. Allen; Hallman, Mikko; Heldt, Gregory; La Jolla, Robert J.; Hoey, Kenway; Houghten, Richard A.; Cochrane, Charles G.

CS Dep. Immunol., Res. Inst. Scripps Clin.

LD La Jolla, CA 92037, USA

SO Pediatr. Res., 29(5), 460-5

SC 1-9 (Pharmacology)

DT J

CO PEREBL

IS 0031-3998

PY 1991

LA Eng

AN CA115(11):105792f

AB Synthetic pulmonary surfactants consisting of mixts. of phospholipids with synthetic peptides based on the amino acid sequence of human surfactant apoprotein SP-B were prepd. These surfactants were analyzed for their ability to lower surface tension on a pulsating bubble surfactometer and for their capacity to improve lung compliance and increase alveolar expansion in a fetal rabbit model of surfactant deficiency. The data demonstrate that several peptides, ranging from 17 to 45 residues in length, matching the carboxy-terminal sequence of the SP-B protein, when appropriately recombined with the phospholipids dipalmitoylphosphatidylcholine and phosphatidylglycerol (3:1), are capable of producing a synthetic surfactant with biophys. and biol. activity approaching that of human surfactant derived from amniotic fluid.

L3 ANSWER 4 OF 6 COPYRIGHT 1992 ACS

AN CA113(1):556n

TI Human surfactant protein (SP) monomer and dimer, related polypeptides, and their use in prepn. of synthetic pulmonary surfactants and in treatment of respiratory distress syndrome (RDS).

AU Cochrane, Charles G.;Revak, Susan D.

CS Scripps Clinic and Research Foundation

LD USA

SO PCT Int. Appl., 89 pp.

PI WO 8906657 A1 27 Jul 1989

DS W: AU, DK, FI, JP, NO

RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE

AI WO 89-US46 5 Jan 1989

PRAI US 88-141200 6 Jan 1988

US 89-293201 4 Jan 1989

IC ICM C07K007-06

ICS C07K007-08; C07K007-10; C07K013-00

SC 1-9 (Pharmacology)

DT P

CO PIXXD2

FY 1989

LA Eng

AN CA113(1):556n

GI Diagram(s) available in offline prints and/or printed CA Issue.

AB Human SP18 monomer and dimer, and synthetic peptides and proteins of 10-60 amino acid residues, are provided for use in forming a synthetic pulmonary surfactant. Also provided is a recombinant DNA mol. capable of expressing, without post-translational proteolytic processing, mature human SP18 monomer. The proteins and peptides can be used in the treatment of neonatal RDS. Thus, SP18 was isolated from human amniotic fluid and purified, and its amino acid compn. was detd. Human SP18 cDNA clones were obtained. Synthetic surfactants were prepd. from combining 1, or 1 of a variety of other synthetic peptides, with a 3:1 mixt. of dipalmitoylphosphatidylcholine and L-.alpha.-phosphatidyl-DL-glycerol. The synthetic pulmonary surfactants had greater surfactant activity than phospholipid alone, as evidenced by their ability to reduce surface tension in vitro. When Norcuron-treated fetal rabbits were instilled with the synthetic surfactants, all but 1 improved static lung compliance, as compared to lungs treated with phospholipid alone.

L3 ANSWER 5 OF 6 COPYRIGHT 1992 ACS

AN CA109(7):50369s

TI Use of human surfactant low molecular weight apoproteins in the reconstitution of surfactant biologic activity

AD Revak, Susan D.;Merritt, T. Allen; Degryse, Eric; Stefani, Lorette; Courtney, Michael; Hallman, Mikko; Cochrane, Charles G.

CS Res. Inst., Scripps Clin.

LD La Jolla, CA 92037, USA

SD J.Clin. Invest., 81(3), 826-33

SC 6-3 (General Biochemistry)

SX 3, 13

DT J

CO JCINAO

IS 0021-9738

PY 1988

LA Eng

AN CA109(7):50369s

AB Two low-mol.-wt. (LMW) apoproteins were isolated from human pulmonary surfactant. SDS-polyacrylamide gel anal. showed one protein (SP 18) to have an apparent mol. wt. of 18,000 when unreduced and 9000 daltons (D) after redn. The second protein (SP 9) migrated at .apprx.9000 D in the presence or absence of reducing agents. Both proteins contain a high no. of hydrophobic amino acids. The N-terminal sequence of SP 18 was detd. A cDNA clone isolated from a human adult lung cDNA library contained a long open reading frame encoding at an internal position the human SP 18 N-terminal sequence. Mixts. of phospholipids (PL) and SP 9 and SP 18 were assessed for their capacity to reduce surface tensions on a pulsating bubble surfactometer. The addn. of 1% apoprotein resulted in a redn. of surface tension after 15 s from 42.9 dyn/cm for PL alone to 16.7 and 6.3 dyn/cm for preps. contg. SP 9 and SP 18, resp. In vivo assessment of reconstituted surfactant activity was performed in fetal rabbits. Reconstituted surfactant consisting of PL + 0.5% SP 18 instilled intratracheally at delivery resulted in a marked increase in lung compliance, while the incorporation of 0.5% SP 9 yielded a moderate increase. These data show the ability to produce biol.active surfactant by the addn. of isolated LMW apoproteins to defined PL.

L3 ANSWER 6 OF 6 COPYRIGHT 1992 ACS

AN CA106(17):133965x

TI Reconstitution of surfactant activity using purified human apoprotein and phospholipids measured in vitro and in vivo

AU Revak, Susan D.; Merritt, T. Allen; Hallman, Mikko; Cochrane, Charles G.

CS Dep. Immunol., Scripps Clin. Res. Found.

LO La Jolla, CA, USA

SD Am. Rev. Respir. Dis., 134(6), 1258-65

SC 6-3 (General Biochemistry)

SX 13

DT J

CO ARDSBL

IS 0003-0805

PY 1986

LA Eng

AN CA106(17):133965x

AB The major apoprotein of human lung surfactant was isolated from amniotic fluid obtained at term gestation. It was disulfide-linked oligomer composed of polypeptide chains of 35,000 daltons. The monomeric unit was glycoprotein, and treatment with peptide:N-glycosidase F resulted in a decrease in mol. wt. to 31,000 daltons. The isolated apoprotein could be recombined in the presence of Ca²⁺ with the phospholipids dipalmitoylphosphatidylcholine and phosphatidylglycerol (3:1) at a wt. ratio of 1:100. The surface tension (.gamma. min.) measured on a pulsating bubble formed in 4 mg/mL phospholipids was reduced from 32.3 to 18.0 dyn cm⁻¹ after 15 s when 1% apoprotein was present. Redn. of disulfide bonds and deglycosylation of the apoprotein did not alter its ability to lower .gamma. min. Fetal rabbits of 27 days gestation had instilled intratracheally at delivery, saline, phospholipids, phospholipids, phospholipids plus apoprotein, or natural human surfactant. The latter two resulted in increased lung compliance and striking improvement in homogeneous alveolar expansion when the lungs were expanded to 10 cm H₂O pressure, fixed, and viewed histol. This effect was also independent of the disulfide-dependent oligomeric structure of the apoprotein or its state of glycosylation. The surfactant produced by recombination of the phospholipids with the isolated apoprotein was, therefore, biophys. active both in vitro and in vivo. Apoprotein can apparently be recombined with phospholipids to produce a biol. active surfactant for use in clin.